

**Notice of Allowability**

Application No.

10/029,883

Applicant(s)

CHARIKAR, MOSES SAMSON

Examiner

Art Unit

Harold E. Dodds, Jr.

2168

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 26 June 2006.
2. ☒ The allowed claim(s) is/are 1-21 and 27-29 (renumbered 1-24).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 070306.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 070306.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Harold E. Dodds, Jr.  
Patent Examiner

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Brian E. Ledell on 3 July 2006.

3. The application has been amended as follows:

Claims 30-33 are cancelled.

4. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: In Figure 4, provide a box around the table, hashing vectors, result vector, and similarity sketch.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### **REASONS FOR ALLOWANCE**

5. The following is an examiner's statement of reasons for allowance:

Independent claim 1 is allowable since the prior art from Chaudhuri et al. (U.S. Patent No. 5,806,061), Dasgupta (U.S. Patent No. 5,612,865), Lazarus et al. (U.S. Patent No. 6,134,532), and Kaufman et al. (U.S. Patent No. 5,101,475) does not anticipate nor render obvious the recited elements in light of claim 1. In particular, Chaudhuri, Dasgupta, Lazarus, and Kaufman do not teach the limitation "creating an  $n \cdot x$  -bit representation of the summed vector by calculating an x-bit value for each coordinate of

Art Unit: 2168

the summed vector, the  $n \cdot x$ -bit representation of the summed vector defining the compact representation of the first object”.

6. Independent claims 14, 27 as amended, and 28 are allowable since the prior art from Chaudhuri et al. (U.S. Patent No. 5,806,061), Dasgupta (U.S. Patent No. 5,612,865), and Caid et al. (U.S. Patent No. 5,794,178) does not anticipate nor render obvious the recited elements in light of claims 14, 27, and 28. In particular, Chaudhuri, Dasgupta, and Caid do not teach the limitation “generating a compact representation of the object using the summed product vectors”.

7. Independent claim 29 is allowable since the prior art from Chaudhuri et al. (U.S. Patent No. 5,806,061), Dasgupta (U.S. Patent No. 5,612,865), Caid et al. (U.S. Patent No. 5,794,178), and Hatakeyama et al. (U.S. Patent No. 5,469,354) does not anticipate nor render obvious the recited elements in light of claim 29. In particular, Chaudhuri, Dasgupta, Caid, and Hatakeyama do not teach the limitation “generating a compact representation of the object by concatenating the calculated bits”.

### **CONCLUSION**

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is

Art Unit: 2168

(571)-272-4110. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Harold E. Dodds, Jr.*

Harold E. Dodds, Jr.  
Patent Examiner  
July 5, 2006

  
GRETA ROBINSON  
PRIMARY EXAMINER

Coordinate	Value	Hashing Vectors
four	0.3	(-4, 2, 6) ~402
score	0.4	(8, -9, -4) ~403

404 ~ Result Vector=  $(-4 \times 0.3, 2 \times 0.3, 6 \times 0.3)$   
 $+ (8 \times 0.4, -9 \times 0.4, -4 \times 0.4)$   
 $= (2.0, 3.0, 0.2)$

405 ~ Similarity Sketch = 111

Fig. 4